

REMARKS

Claims 62 and 63 stand rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for methods known to the inventor, does not reasonably provide enablement for every conceivable method. As claims 62 and 63 have been cancelled and new claims are pending, the present rejection is rendered moot and reconsideration of the rejection is respectfully requested.

Claim 63 stands rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Claim 63 has been cancelled without prejudice, thereby rendering the present rejection moot. Reconsideration of the rejection is respectfully requested.

Claim 63 stands objected as being of improper dependent form as failing to further limit the subject matter of a previous claim. Claim 63 has been cancelled without prejudice, thereby rendering the present rejection moot. Reconsideration of the rejection is respectfully requested.

Claims 62 and 63 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as the invention. Claims 62 and 63 have been cancelled without prejudice, thereby rendering the present rejection moot. Reconsideration of the rejection is respectfully requested.

Claim 62 stands rejected under 35 U.S.C. §102(b) as being anticipated by the Partin, et al. patent. Claims 1, 3, 5-10, 16-19 and 45 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Partin et al reference.

In Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81 (Fed. Cir. 1986) it was stated: "For prior art to anticipate under §102 it has to meet every element of the claimed invention."

In Richardson v. Suzuki Motor Co., Ltd., 868 F.2d 1226, 9 U.S.P.Q.2d 1913 (Fed. Cir. 1989) it was stated: "Every element of the claimed invention must be literally present, arranged as in the claim."

The Office Action states that the Partin et al patent discloses a portable fiber optic detector that senses the presence of specific target chemicals in air or gas by

exchanging the target chemical for a fluorescently-tagged antigen that is bound to an antibody that is immobilized on an optical fiber. However, when read more specifically, the Partin et al patent does not describe an evanescent field within the optical fiber. Instead, the Partin et al reference specifically describes a sensor which affixes the antibody to the distal end, rather than along the side of the fiber as would be the case of an evanescent sensor. The present invention, as set forth in the presently pending independent claims, claims a optical fiber having an evanescent field. this is not disclosed in the Partin et al patent.

Additionally, the Partin et al reference describes a light injection apparatus and measurement instrument in which light without any beam shaping is injected with a lens into an optical fiber which then transmits the light to a sensitive tip or sphere which is illuminated and being so illuminated omits light of different wavelengths which are collected and measured using measurement means such as a spectrograph. In contradistinction, the apparatus of the presently pending independent claims employ different optical means which are used to change the shape of the field without inducing any appreciable optical losses of the cylindrical beam of light. In fact, the apparatus of the present invention discloses that the light energy is concentrated at the critical angle for total internal reflection of the light propagating in the sensor fiber when the fiber sensor is immersed in the fluid containing the analyte to be detected. Further, the apparatus of the present invention uses a vastly different device for isolating the fluorescent signal from the incident illuminating light. Because fluorescence emitted by the fluorescent molecules attached to the sensor surface is typically emitted across a broad band of wavelength, in order to achieve high sensitivity in detecting this fluorescence, it is essential to collect fluorescence emitted at all wavelengths with the exception of the wavelength of the incident light used to excite fluorescence on the sensor surface. Therefore, light detected by detection means at the incident wavelength creates a background signal above the desired fluorescent signal from the sensor, and both the sensitivity and signal to noise ratio of the instrument is lowered. This is prevented by the apparatus of the present application which results in the sensitivity of the instrument in the present application to be increased thus overcoming

problems found in the apparatus of the prior art. As the Partin et al reference does not disclose the evanescent field of the present application, nor does it measure light in the same manner as that of the present application, the claims are patentable over the Partin et al reference and reconsideration of the rejection is respectfully requested.

Claim 63 stands rejected under 35 U.S.C. §103(a) as being unpatentable over the Partin patent, while claim 63 has been cancelled without prejudice an argument with regard to the distinctions between the Partin reference and the presently pending claims has been presented previously and reconsideration of the rejection is respectfully requested.

The drawings are objected to under 37 CFR 1.83(a). As the claims have been cancelled without prejudice, this renders the present rejection with regard to the drawings moot and reconsideration of the rejection is respectfully requested.

The remaining dependent claims not specifically discussed herein are ultimately dependent upon the independent claims. References as applied against these dependent claims do not make up for the deficiencies of those references as discussed above. The prior art references do not disclose the characterizing features of the independent claims discussed above. Hence, it is respectfully submitted that all of the pending claims are patentable over the prior art.

In view of the present amendment and foregoing remarks, reconsideration of the rejections and advancement of the case to issue are respectfully requested.

The Commissioner is authorized to charge any fee or credit any overpayment in connection with this communication to our Deposit Account No. 11-1449.



Respectfully submitted,

KOHN & ASSOCIATES, PLLC

A handwritten signature in black ink, appearing to read "Amy E. Rinaldo", written over a horizontal line.

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Connie Herty